NEW

DMEK
Descemet Membrane
Endothelial Keratoplasty

INNOVATION
MADE BY GEUDER®

THE INNOVATIVE SYSTEM
FOR TREATING
ENDOTHELIAL CORNEAL
DISEASES

Geuder®
Precision made in Germany
Clinical advantages of DMEK

Transplanting extremely thin lamella promotes considerably faster visual recovery than DSAEK. DMEK prevents interface problems, causes neither postoperative astigmatism nor myopia, and substitutes more endothelial cells (up to 9.5 mm graft size). As a result, visual acuity improves in many cases by 0.8 or better after only one week. Due to these very good results, DMEK might become the standard therapeutic technique for treating endothelial corneal diseases.

Instruments for standardization of DMEK

The success of this elegant technique is largely dependent on the quality of the fragile graft and the gentle manipulation thereof. It is important that the fragile endothelial cells are not touched or stressed mechanically during preparation or implantation. In order to achieve reproducible results, a standardized technique and specific instruments which ensure a no-touch surgical procedure are necessary.

On the following pages we would like to introduce a new surgical set which will permit experienced surgeons to perform DMEK in the clinical routine. This set allows the no-touch preparation of a Descemet lamella and its subsequent transplantation through a 3.0 mm clear cornea incision. I hope that the promising advantages of DMEK will be confirmed in many procedures and that DMEK will assert itself as the method of choice.

Literature:
EXTREMELY SAFE: THE IMPLANTATION PROCEDURE

NO TOUCH
- Safe and easy intake of the graft through the large rounded opening of the cartridge
- Reduced risk of damage to the fragile graft and less endothelial cell loss

NO FRICTION
- Smooth sliding of the graft in liquid into the anterior chamber
- Safe flow of the graft through the streamlined design of the glass cartridge

NO SUTURE
- Small incision size (3 mm) thanks to slender opening of the cartridge
- Reduction in surgically induced astigmatism

HIGHLY COMFORTABLE: THE ACCESSORIES

- Single-use DMEK Cartridge
- Tubing
- Standard single-use syringe (not part of the set)
Preparing the Donor Cornea

In order to prepare the donor cornea, the eye must be fixated securely.

G-38620
SZURMAN
DMEK GRAFT RETAINER
for preparation of DMEK graft

G-38623
REMKY
DMEK
KERATOPLASTY FORCEPS
modified by Szurman
to hold donor eye during preparation

Preparing the Descemet Lamella

In order to prepare the Descemet lamella, the membrane is scraped 360° starting at the periphery. Around 20-40 % of the underlying stroma is lifted away.

G-38621
SZURMAN
DMEK
PREPARATION SCRAPER
for removal of Descemet layer of graft

G-38622
SZURMAN
DMEK
PREPARATION SPATULA
for removal of Descemet layer of graft

G-38624
SZURMAN
DMEK
PREPARATION FORCEPS
for removal of Descemet layer
3 Staining the Descemet Lamella with Dye

In order to recognize the Descemet side of the graft, it is advisable to stain it during preparation.

G-38625
SZURMAN
DMEK MARKER
to mark Descemet layer during preparation

4 Punching out the Donor Cornea

The last step involves punching out the desired size. The graft should then be stored in liquid so that its fragile structure is not stressed.

G-32672
SILICONE BLOCK
for graft cornea

G-20085
KERATOPLASTY TREPHINE
HAMBURG MODEL
8.5 mm

G-51-900-900
SINGLE USE
STANDARD TREPHINE
9.0 mm, sterile

Trephines are also available in other sizes and models
PREPARING THE PATIENT’S EYE AND IMPLANTING THE GRAFT

1 Making the Main Incision, Paracentesis and Iridectomy
Due to the slender design of the DMEK cartridge, only a sutureless 3.0 mm clear cornea incision is necessary. The 25 gauge hybrid scissors are optimal for manipulation of the iris.

   G-34106
   NANOEDGE PHACO SLIT KNIFE
   angled, 3.0 mm, bevel up,
   6 pcs. per box, sterile

   G-34194
   SINGLE-USE STILETTO (MCR)
   KNIFE
   23 gauge, angled
   6 pcs. per box, sterile

   G-32948
   HATTENBACH
   HYBRID SCISSORS
   for the anterior chamber
   25 gauge / 0.5 mm

2 Preparing the Anterior Chamber
Conventional hydrodissection cannulas are used to prepare the anterior chamber.

   G-32167
   SAUTTER
   HYDRODISSECTION CANNULA
   rotation of 90°,
   27 gauge / 0.40 mm

   G-34245
   SAUTTER
   SINGLE-USE HYDRODISSECTION CANNULA
   27 gauge / 0.4 x 22 mm
   10 pcs. per box, sterile

3 Descemetorhexis
Incision hooks and the Descemet scraper enable a safe circular incision and subsequent polish.

   G-38607
   DESCEMET INCISION HOOK
   diameter of hook: 0.3 mm
   total length: 103 mm
**4 Injecting the Graft**

For better visualization, the Descemet lamella should be stained with a suitable dye before loading the cartridge. The graft is loaded into the DMEK cartridge over its large posterior opening which ensures an atraumatic intake of the Descemet lamella. To carry this out, the accompanying tube is connected on one end to the small opening of the cartridge and on the other end to a syringe which facilitates the gentle intake of the membrane through aspiration.

A controlled implantation of the graft into the anterior chamber can then be performed by injecting BSS into the larger opening of the cartridge with a syringe. A double irrigation set enables the touch-free unfolding and positioning of the Descemet lamella. The injection of air helps to attach the Descemet membrane to the cornea.
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